

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
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Daisuke KUMAKI et al.)
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Serial No.: 10/575,202)
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Filed: April 10, 2006)
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For: Light-Emitting Element and)
Light-Emitting Device)
)
Examiner: Anthony Ho)
)
Art Unit: 2815)
)
Confirmation No. 7114)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE (C) TO OFFICE ACTION

Sir:

Applicants have the following response to the Office Action of October 6, 2009.

Applicants will address each of the rejections in the order in which they appear in the Office Action.

Claim Rejections - 35 USC §102

Matsumoto et al.

In the Office Action, the Examiner rejects Claims 15-17, 19-33 and 35-47 under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Matsumoto et al. (US 2005/0098207). This rejection is respectfully traversed.

More specifically, independent Claims 15, 16, and 32 recite the feature of “a third layer including a transparent conductive film.” In the rejection, the Examiner contends that Matsumoto discloses a third layer (76 or 77) including a transparent conductive film. However, Matsumoto states that layer 76 is a layer of $V_2O_5:CuPc$ and that layer 77 is a layer of $CuPc$. See e.g. paragraph [0145] in Matsumoto. Neither of these is a transparent conductive film. For example, copper phthalocyanine ($CuPc$) is a pigment. See paragraphs [0135] - [0136] in Matsumoto. Therefore, Matsumoto does not disclose or suggest the claimed feature of “a third layer including a transparent conductive film” of independent Claims 15, 16 and 32.

Therefore, independent Claims 15, 16 and 32 are not disclosed or suggested by Matsumoto, and Claims 15, 16, 32 and those claims dependent thereon are patentable over Matsumoto. Accordingly, it is respectfully requested that this rejection be withdrawn.

Forrest et al.

The Examiner also rejects Claims 32-38, 42-44 and 47 under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Forrest et al (US 5,703,436). This rejection is also respectfully traversed.

More specifically, independent Claim 32 recites the features of:

- “an anode for the light-emitting material;
- a cathode for the light-emitting material;
- a first layer containing the light-emitting material between the anode and the cathode;
- a second layer containing an organic compound and an electron-supplying material between the first layer and the cathode;
- a third layer including a transparent conductive film between the second layer and the cathode; and
- a fourth layer containing a hole transporting material between the third layer and the cathode.”

In the rejection, the Examiner contends that Forrest discloses (in Fig. 2A) an anode (35) containing a light-transmitting material, a first layer (20E) containing a light-emitting material, a second layer (20T), a third layer (middlemost 26I), a fourth layer (21H or 22H), and a cathode (26M). Applicants respectfully disagree.

In particular, in Forrest, in case of focusing LED 20 (since the Examiner equates the layer 20E with the first layer of Claim 32), current flows from the positive terminal of the battery 32, into the anode terminal 40 and from the terminal 41, serving as cathode terminal to negative terminal of the battery 32. See Fig. 2A and Col. 5, line 57 – Col. 6, line 2 in Forrest. Hence, in Forrest, it appears that layer 35 serves as an anode and the middlemost layer 26I serves a cathode of the LED 20. Therefore, if layer 20E is alleged to correspond to the first layer of Claim 32, layer 35 to correspond to “an anode for the light-emitting material”, then the middlemost layer 26I would allegedly be “a cathode for the light-emitting material.” Hence, there is no layer corresponding to the claimed “a third layer” or “a fourth layer”, as recited in Claim 32.

In the rejection, the Examiner contends that the recitation “for the light-emitting material” in Claim 32 specifies an intended use or field of use and is treated as nonlimiting. Applicants respectfully disagree. The recital of “for the light-emitting material” recites a feature of the anode and the cathode and patentably distinguishes the claimed invention from Forrest. For example, as explained above, if 35 is allegedly the anode for the light-emitting material, then 26I would be the cathode for the light emitting material, and as a result, there is no third or fourth layer as claimed.

Therefore, independent Claim 32 is not disclosed or suggested by Forrest, and Claim 32 and those claims dependent thereon are patentable over Forrest. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim Rejections - 35 USC §103

Claims 18 and 34

The Examiner also rejects Claims 18 and 34 under 35 USC §103(a) as being unpatentable over Matsumoto in view of Forrest. This rejection is also respectfully traversed.

Each of these claims is a dependent claim. Therefore, for at least the reasons discussed above for the independent claims, each of these claims is also patentable over the cited references. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 39-41 and 45-46

The Examiner also rejects Claims 39-41 and 45-46 under 35 USC §103(a) as being unpatentable over Forrest and further in view of Ishihara et al (US 2003/0048072). This rejection is also respectfully traversed.

Each of these claims is a dependent claim. Therefore, for at least the reasons discussed above for the independent claims, each of these claims is also patentable over the cited references. Accordingly, it is respectfully requested that this rejection be withdrawn.

Conclusion

It is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any fee should be due for this response, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Date: January 6, 2010

Respectfully submitted,

/Mark J. Murphy/

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